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IProuter – the mobile communication gateway

The way we run public transport today has definitely changed over the past decades. Long gone are the days where a driver stepped on board, arranged destination signs and other settings, sold paper tickets from a pad and just drove the vehicle according to the flow of traffic. Nowadays all those processes run fully controlled by intelligent operation control systems and on-board computers or electronic ticketing machines in the vehicle. Hence, our buses and trains are no longer just vehicles transporting passengers, but also a kind of rolling computer.

Modern Intelligent Transportation Control Systems cover a large variety of applications that are based on communication between central systems and mobile computers in vehicles. For example, actual position information and schedule adherence have to be transmitted frequently for real-time passenger information and operations control. Additionally, new features like vehicle diagnostics, video surveillance, infotainment systems, or real-time transfer information have to be integrated. All those applications require the exchange of masses of data and therefore call for a broadband data communication link based on the IP protocol.

The IProuter serves as the central communication gateway for all IT systems on-board; guaranteeing a smooth transfer of all mass data needed in modern public transport systems.

Intelligent communication concept

GSM / GPRS / EDGE / UMTS, 802.11 b/g/n WirelessLAN, WIMAX, 4.9GHz Wi-Fi and MESH are communication modes that provide the needed bandwidth for today's communications challenges, and have become especially important within public transport. To facilitate the use of these modern communication channels as much as possible, INIT developed the IProuter.

The IProuter serves as the central communication gateway to the dedicated Wide Area Network (WAN) for all IT systems on-board. Hence, it provides a large variety of on-board interfaces (Ethernet, USB, VGA, serial ports, audio), offering the access to the broadband data communication network for multiple vehicle devices (e. g. on-board computers, ticket printers, CCTV, TSP modules, TFT screens, passenger counting systems).

The IProuter guarantees a seamless switch-over between all available communication channels and selects automatically the most suitable communication method for a specific data communication demand, as well as the appropriate fall back channel.

On-board Wi-Fi

In addition, the IProuter can also serve as an internet access point for passengers on board. This service provides the opportunity to utilise travel time in the best way possible.

For example, passengers can check emails or work online organising their tasks for the day while riding to work. This is a convincing benefit when it comes to persuading the public to switch from cars to taking public transport.

With the multi-functional IProuter, innovative transportation providers can improve their customer service as well as their processing of mass data. In today's transportation environment, using the most efficient means of communication is vital to the success of any transport provider.

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